Safety Management Plan 45th New Zealand Hang Gliding Open Championship





Dates: 2nd-11th February – 2023

National Competition based in Murchison

Document Management: This document is based on an NZHGPA template for Paragliding and Hang Gliding competitions. It endeavours to outline the various safety strategies and frameworks in place that support a safe competition, and the strategies and processes that will be enacted in the occurrence of a safety related incident.

The New Zealand Hang Gliding Open Championship 2023 is a 'not for profit' Hang Gliding event organised for and on behalf of members of the NZ Hang Gliding and Paragliding Association and competition participants so as to promote the sport of Hang Gliding and to aid in the selection of New Zealand National champions to represent New Zealand at world class events.

This document is available to every person involved in the competition, whether competing or otherwise. Everyone involved is encouraged to read, understand and make a copy if appropriate. This document is updated and edited each year prior to a specific competition in order to incorporate unique safety concerns for conducting a competition in its specific region. Copies of this document are submitted to the NZHGPA executive, and the HGCC for review. Competition directors and organisers have a copy of this document for viewing at any time throughout the competition.

The NZHGPA Operations Manual available from the NZHGPA website has a wealth of information on Hang Gliding & Paragliding organisation and procedures

Contents

Document Management	
Competition Overview	3
Competition Promotion	
Primary competition Location	
Primary Contacts	
Safety Strategy and Objectives	5
Pilot Vetting	
Pilot Information	
Safety Personnel	F
Visitors & Free Flyers	7
Task Selection and Safety related Competition Issues and Rules	
Pilot Check-In and Check-Out System	
Traffic Management	

Communication and Pilot Tracking	8
Emergency Plan in the Occurrence of Pilot Injury	
Emergency Plan in the Occurrence of a Missing Person	
Hazards and Risks	
Situation Management and Mitigation	
Accidents and Reporting	
Media	15

Competition Overview

The 45th New Zealand Hang Gliding Open Championship competition is a FAI (Federation Aeronautique International) sanctioned, New Zealand (National Aerosport Control) endorsed, cross-country Hang Gliding competition conducted in accordance with FAI and NZHGPA guidelines and Rules as amended, from time to time, by the New Zealand Hang Gliding Competition Committee.

Up to 50 Hang Glider pilots will launch their aircraft from elevated terrain, usually a recognised Hang Gliding take-off site and then attempt to complete a flying course that can be as long as 150km. This is known as a 'task' and there will be one task on each day of the competition, weather permitting.

The main focus of the week will be to facilitate the Nationals Open Class for Intermediate and Advanced pilots. In conjunction with this we will also run a Sport Class for king-posted gliders. Novice pilots are welcome to attend and fly when conditions permit (and are within the parameters of their rating).

Participants

Competing pilots have a variety of competition experience. All participants have been vetted to ensure that they are members of the New Zealand Hang Gliding and Paragliding Association (NZHGPA). Acquiring NZHGPA membership requires the provision of a Hang Gliding license issued either in New Zealand or overseas and this ensures that competing pilots have been trained to an international standard which includes instruction on safety management and aeronautical competency.

In order to compete in the National Championships pilots must hold either an Advanced or Intermediate rating. Novice pilots may attend and fly when conditions permit however only under the supervision of an instructor. As per their rating Novices are restricted to top to bottom flights only. Novice pilots are not part of the formal competition and are not scored. These novice pilots have been vetted further (by checking with their original instructor) as being suitably experienced in order to participate. It is anticipated that by flying with more experienced pilots that these novice pilots will be mentored and safely guided to participate and encouraged to confidently participate in future competitions.

Competition Promotion

The 'Airtribune' competition hosting website: (https://airtribune.com/44th-new-zealand-hang-gliding-open-championship-fa/info) has been used to promote and provide detailed information for the competition for all interested parties.

Primary Competition Locations

The initial compulsory safety briefing and thereafter all daily briefings will be conducted at the: Open Air Lounge Room, Riverside Holiday Park, Murchison. Details and information for the day, and the next, will be posted on a discreet 'What's App' platform.

The primary take off location is:

Mt Murchison.

However, should weather conditions dictate then alternate launch sites may be used. These include, but are not limited to:

- Tapawera
- Beebys Knob
- Canvas Town
- Footes
- Takaka Hill

Take off locations may be changed on a case by case basis depending on weather and wind direction on the task day.

Typical tasks will keep pilots within about 60km of these takeoff sites.

Primary Contacts

- Tom Mulder Competition Organiser, 0211481831
- Shane McKay Competition Organiser, 0211408204

- Steve Cronin Competition Organiser, 0211237024
- Kevin McManus Competition Director, 0211340463

Safety Strategy and Objectives

The aim of the competition is to provide a fair, fun and rewarding experience and to encourage and promote New Zealand Hang Gliding competition.

The first strategic pillar of the Organising Committee is safety. It is the intention of the organisers to complete the competition with a level of zero safety related incidents, meaning that any level of injury, other than entirely trivial, is deemed unacceptable.

Several processes and frameworks are in place to support this goal, as described below.

Pilot Vetting

Pilots have been vetted for safety and capability. This is described above.

Pilot Information

Safety related information is available to the pilots in the following forms.

- This Safety Management plan is available for download and has been emailed to all competitors with a request that they study it.
- Notice of the impending competition is notified to other air users by utilising Aeronautical Information Publications(AIPs) and /or NOTAMs.
- An emergency plan has also been provided to all competitors with guidance and instruction on what to do in the occurrence of an emergency such as a Hang Glider crash, missing pilot or pilot injury, fire related emergencies.
- A mandatory safety briefing takes place at the start of the competition. Pilots are not able to partake unless they have attended this. This briefing covers all the safety aspects that are covered in this plan.
- Daily briefings take place before proceeding to the flight area. Safety related points from the previous days flying will be spoken to, and the
 opportunity given to anyone attending, to raise any other safety related matter. The task for the day will also be given during this briefing and cover
 any specific hazards and safety considerations related to the day and the chosen flight location.
- A 'Task Committee', nominated at the initial briefing and made up typically of the most experienced pilots to have flown in the region, create a task suitable and safe for all levels of pilots competing. Ideally, a little simpler at the start and becoming somewhat more challenging for the advanced pilots as the flight progresses. Normally the novice pilots end up landing quite early.
- Depending on the site, actual conditions encountered, and any new potential hazard identified, additional Task briefings may take place on the top of the mountain before launch.
- The flying safety committee, nominated at the initial safety briefing, will assess each task and the present and forecasted weather, and make recommendations to the pilots and Meet Director (MD) as to whether the task is deemed safe or not. During the course of the flight safety

committee members will continually assess the weather and conditions and will signal to stop the task if dangerous conditions arise. The signal to stop the task and land is a safety committee member with both legs out of their harness and pointing to the ground. Pilots witnessing this signal are to land as soon as it is safe to do so.

• Pilots, particularly those visiting New Zealand, are made aware of the contact details for emergency services in NZ and are reminded that medical treatment, in the occurrence of an accident, is free in New Zealand thanks to ACC!

Safety Personnel

- A three person safety committee will be flying with the competitors on Hang Gliders. The job of the safety committee is to monitor conditions, weather and otherwise and provide information on safety to all competitors. This committee also has the prerogative of stopping the day's flying activities if there is sufficient safety concern (examples could be wind that may increase to unsafe levels or a perceived risk of thunderstorm activity). The committee consists of experienced Hang Glider pilots who are familiar with the terrain and climate of the respective flying arenas. Pilots are able to express safety concerns to the safety committee or Meet Director at any time prior to or after flying.
- The Meet Director is an experienced Hang Glider and competition pilot who is familiar with the terrain and climate of the flying arenas. The Meet Director has the prerogative of amending a task or stopping the day's activities for the same reasons as described above.
- A dedicated launch marshal will be placed in charge of the take off to ensure maximum safety, keeping visitors clear, and launch efficiency. This launch marshal will be in attendance on the launch area until the final pilot has taken off. They have the ability to close, or suspend, the launch at any time for safety reasons. They are equipped with, or have access to, a wind-meter, a first aid kit and fire extinguisher and cell phone.
- All pilots are constantly briefed and reminded that they hold primary responsibility for their own safety and of others and thus also form part of the safety personnel framework.

Visitors & Free Flyers

• Visitors and Free Flyers must make arrangements with the comp organisers prior to making their way up the hill.

Task Selection and Safety Related Competition Issues and Rules

- A penalty and protest system is in place within the competition rules that can be activated in the occurrence of any unsafe behaviour by competitors (for example, flying in cloud or aggressive piloting).
- Punitive measures for unsafe activities can include censure, warnings, points penalties and exclusion from the task or competition overall.
- The three person task committee is responsible for setting the daily flying task. The three person safety committee has the prerogative to overview the proposed task before it is presented to the pilots and to suggest alternatives, or enforce changes, if there are safety concerns. The Competition director may have an input into both committees.

The task committee is particularly familiar with local weather patterns and flight planning. They have access to a plethora of online, gliding specific, weather and flight planning websites such as MetService, MetVuw, NZ RASP, SkySight, XC Skies. Etc for the latest in actual and forecast weather situations. By nature, Hang Gliders can only operate in a very small window of fine weather conditions such as Visual Meteorological Conditions (VMC) and moderate winds (less than about 30km in the mountains)

Typically tasks are set for a launch around midday /early afternoon and the first of the pilots will be landing shortly thereafter with the slower possibly flying until 4 or 5pm. This allows ample time for retrieves and even search and rescue prior to last light during the long summer days.

- A system is in place to award competition points to pilots if they choose not to fly due to safety related concerns. This mitigates the pressure to fly that may otherwise occur.
- A system is in place to reward pilots (with competition points) that assist in the occurrence of a safety related incident and, by doing so, jeopardise their own competition performance.
- Safety, the primary concern, is ongoing throughout the competition. Pilots carry the primary responsibility for their own safety, if they experience conditions that they don't feel comfortable flying in or consider unsafe they should make their way to the nearest safe landing.

Pilot Check In and Check Out system

A mandatory system is in place for all pilots to ensure that they check-in each day (thus, registered as flying) prior to flying and then check-out once safely landed. This is enabled by systems such as SMS, WhatsApp, and GPS trackers. There is a central coordinator who maintains the list of all pilots flying and they are marked off as 'safe' once they have 'checked out' of the competition. This person is primarily the ground based safety officer but responsibility may be moved to another staff member at the discretion of the competition Director.

The list enables the organisation to monitor the status of each competitor after each day's task and to alert to any potential missing pilot situation so that the missing pilot procedure can be enabled (see attached Emergency Plan).

All competition safety staff stay on alert until all pilots are marked off as safe.

Traffic Management

The main body of vehicles will convoy up the mountain each day. All vehicles must comply with local (e.g. forestry and farmer) requirements and this may include the carriage of shovels and fire extinguishers, water, and exhaust spark suppressors (for petrol vehicles only).

Vehicles may be required to travel in convoy to facilitate ease of movement and reduced congestion.

Only road worthy vehicles and trailers are permitted to be part of the competition convoy. All vehicles are requested to monitor the radio safety channel during the convoy process.

Safe convoy protocol is clearly briefed at the safety briefing.

Traffic down the mountains and between the flying sites is not monitored.

Communication and Pilot Tracking

- UHF radios are mandatory and will be carried by all competitors. A channel for in flight communications and a channel for emergency communications will be selected and made known to all competitors. The in flight communication channel will be used to issue stop task notifications or alert pilots of incoming helicopters in the occurrence of an emergency. The in flight communications channel will not be used for general communication amongst pilots. The emergency channel is reserved for communications in the occurrence of an emergency. The in flight and emergency channels will be identified in the local rules for the competition.
- SMS (text) and WhatsApp these are used for the Check In and Check Out system and general notices. All pilots are added to the group before the first flying task.
- Whatsapp Drivers group A separate drivers group on whatsapp including the competition organisers is used to notify when each vehicle's pilots are retrieved and safe for the day. Each vehicle is responsible for accounting for and reporting back after retrieving all their pilots. If a pilot is retrieved by another vehicle, they must still be accounted for by their vehicle/driver.
- Mobile Phone these are used for all types of communication. It is known, and communicated to the pilots, that there are large areas of the flying arena with no, or limited, cell phone reception. The take off areas are known to have strong cell phone reception.
- Satellite trackers are required to be used by each pilot. These allow an emergency SOS message to be broadcast in the occurrence that no cell phone coverage is available. The accepted models are Delorme InReach and Spot. Pilots are obliged to enable "tracking mode" on these devices during all flights. This enables the organisation to track the pilots on a map via the 'TrackMe.NZ' website. Competitors may use their own tracking devices or they will be offered a rental Spot tracker for the duration of the competition. A share page will be provided by Trackme NZ which includes all the tracking, personal and rented of competing pilots. Pilots may use their personal Satellite tracker otherwise they will be provided with a rental option.
- The use of "XC Track" this is not mandatory but all pilots are encouraged to use this application which works when 3G cell phone cover is available. It enables the competition organisers, and other pilots, to track the location of all competitors during a task.
- Visual signal of emergency A fully assembled glider or a broken glider settled in an unusual position such as upside down or on a fence/tree/obstacle likely indicates a pilot in distress. Pilots witnessing this should take note of the time and position of the glider and radio this information through to other pilots and/or ground crew, and/or should land if safe to do so and render assistance.
- Contact Details all pilots are obliged to provide cell phone and WhatsApp contact details to the organisation as part of the pilot registration process, along with the address of their local accommodation and contact details for a third party to be used in the occurrence of an emergency.

Stop Task Procedure

If a task is stopped a notification will be broadcast on the in flight UHF radio channel. Pilots that receive this communication should indicate to other pilots that the task has been stopped by dangling their legs out of their harness (if they can do so safely) and moving them together and apart.

Emergency Plan in the occurrence of pilot injury

A copy of the emergency plan, in the occurrence of injury, is given to all pilots as part of their pilot pack and is included with this Safety Management Plan.

Pilots will be provided with the RCCNZ 24/7 Emergency phone number (0508 222 433) and asked to enter it into their phones prior to flying.

If an observed injury is deemed to be anything other than trivial then Rescue Services must be called:

- Urban accessible Environment Emergency services (ambulance) must be called (111).
- Rural or inaccessible Environment Rescue Coordination Center (RCCNZ) 24/7 Emergency phone number must be called (0508 222 433)

In the occurrence that a pilot is deemed to have crashed in an area where injuries cannot be assessed immediately, and that pilot is unable to communicate then the RCCNZ 24/7 Emergency phone number must be called (0508 222 433)

Emergency Plan in the occurrence of a missing person

A copy of the emergency plan, in the occurrence of a missing person, is given to all pilots as part of their pilot pack and as included with this Safety Management Plan.

The Check-In and Check-Out process is designed to alert the organisation to any pilot that has not reported themselves as safe after flying.

If, after 2000 NZT a pilot is still not reported as safe then the Meet Director and Organising Committee will commence activities to locate the pilot. This includes trying all known methods of contact (Cell phone, WhatsApp and checking pilot accommodation and known associates).

If, by 2100 NZT, the pilot has not been located then emergency or rescue services should be contacted as determined by the presumed status of the pilot:

- Urban accessible Environment Emergency services (ambulance) must be called (111).
- Rural or inaccessible Environment Rescue Coordination Center (RCCNZ) 24/7 Emergency phone number must be called (0508 222 433)

Information to be provided to LSAR include:

- Name and cell phone contact details for the missing pilot
- Address of local accommodation

- Colour of Hang Glider
- Last known location based on satellite tracker and information from witnesses
- Details of the course line and pilot's likely position in relation to it

Hazards and Risks

Hang Gliding is by nature a hazardous activity that involves recognisable elements of risk. The CAA and the NZHGPA insist on a rigorous licensing, safety and monitoring program for all pilots and their equipment to mitigate these concerns.

Cross- country competitions inevitably present a different kind of risk to the average pilot.

Equipment certification, varying pilot experience levels and constant briefings are part of the competition environment.

New Zealand's Southern Alps provide for some of the world's most stunning and challenging flying, but it has changeable weather conditions. Weather provides for unique and challenging planning scenarios.

Pilot fitness is a significant hazard. If a pilot is not fit to fly then they must not compete. The onus is on the pilot. A pilot must consider if they are free from any Illnesses, that if they are on Medication – that it is safe medication only. Pilots must not be overly Stressed or Fatigued and that they must be free of Alcohol or Drugs. The NZHGPA has a zero tolerance for Drugs and Alcohol as per the NZHGPA Operations Manual. Pilots must be suitably nourished and hydrated before flight.

Hazards in cross-country competitions may include but is not limited to:

Hazard	Potential Risk / Degree	Mitigation
Spectators	 Pilot / spectator injury ranging 	Use of a launch director
	from minor to fatal	Task safety briefing
		 Hazard identification / marked off area "for take-off only"
		 Personnel trained in first aid and the availability of a first aid kit at take off.

Other air traffic / Users	 Collision Pilot injury (self /other) ranging from minor to fatal 	 AIPs, NOTAMs and timely communications with local Air Users to advise of heightened Hang Glider activity. Task safety briefing VFR Flight Rules Hazard identification Use of Airband radios Listen out. Use your radios Speak up!
Power cables	 Electrocution injuries, ranging from serious to fatal Public inconvenience 	 Identification of this specific hazard at task briefing Keep your eyes out to identify possible lines. Immediate contact with emergency services to disconnect power
Weather	 Pilot Injury ranging from minor to fatal. Turbulence Variability. 	 Detailed briefings A plethora of weather and flight planning websites. Tasks can be stopped at any time by the Competition Director. Pilot check back process
Mountains	 Remoteness Lack of Communications. Mountain passes used by other air traffic - congestion. Turbulence Flight close to terrain. 	 Briefings Instruction and mentoring Do not 'push on' outside your own flying limits. Know when to say 'enough'
Extended no landing zones – forests, wooded areas, water	 Injury Remoteness and long walk outs Fatigue Delays in Reporting /rescue 	 Briefings Set considerate tasks. Don't take unnecessary risks. Always have landing options. Instruction and mentoring

	• Exposure	Use of emergency services
Equipment	● Injury	 Pilots check their gear prior to each flight for air worthiness. Know your wing characteristics. All gliders to have a current WOF
Pilot Fitness – Mental Emotional Physical	Injury to self and or otherNervousness	 Be Prepared Illness, Medication, Stress, Alcohol, Drugs, Fatigue, Nourished. Detailed Flight Briefings Instruction and mentoring Briefings with respect to use of medicines and drugs Hydration Carry a personal first aid kit
Poor radio reception	 Check back delays. Search and rescue delays Isolation Exposure Fatigue 	 Pre-flight brief. Beware of flying behind ridges and mountains Use satellite trackers. Check back protocols. Carry 'Pilot Safety Plan' Carry UHF Carry mobile phone with 'navigation' details: compass / GPS for coordinates. Carry spare batteries / portable charger.
Traffic accident	 Injury ranging from minor to fatal Blockage of access for emergency response 	 Assigned convoy marshal to monitor convoy safety Tactics to reduce upward and downward vehicle traffic at the same time on the mountain roads Ground based safety officer trained in first aid and equipped with first aid kit
Heat, Sunburn and Sunstroke	DehydrationBlistering / painDistraction and poor thinking skills.	 Sun cream available at the take off, provided by the organisation Pilots reminded to bring and use sun cream Pilots reminded to hydrate during flight

	Lack of coordination	Provide sun shelters at launch.
Animals and farm stock	 Injury to Self /other Injury to stock Damage to property Public inconvenience 	 Detailed briefings and sound tasking Keep a good lookout Be considerate and stay well clear NZHGPA 'code of conduct' NZHGPA insurance Visit unhappy farmers asap.
Fire	 Forest fire Burn injuries Blockage of access for emergency response 	 Fire extinguishers and shovels, water, and exhaust spark suppressors (for petrol vehicles only) in all vehicles Smoking ban at all competition locations other than the HQ or in enclosed vehicles Electronic cigarettes are not deemed to be a fire hazard

Situation Management and Mitigation

This table defines the some identified situations, potential outcomes and mitigation strategies.

Situation	Potential outcome	Mitigation
Hang Glider crash on take off	Pilot injury ranging from minor to fatal	Experienced launch directorTask safety briefing

		 Hazard identification Personnel trained in first aid Availability of first aid kit at take off Cell phone coverage for calling emergency services
Hang Glider crash on course line	Pilot injury ranging from minor to fatal	 Task safety briefing Hazard identification Ground based responder trained in first aid with first aid kit and fire extinguisher Information relayed from the air by radio In the occurrence of inadequate cell phone coverage, correspondence to emergency service by relayed radio call or satellite beacon If the incident is deemed serious then the task is stopped to allow all personnel to focus on mitigation of the incident
Hang Glider impact with power cables	 Falling and electrocution injuries, ranging from serious to fatal 	 Identification of this specific hazard at task briefing Immediate contact with emergency services to disconnect power Otherwise as above
Missing pilot	 Delayed response to potential injuries Exposure Exhaustion Dehydration 	 Pilot check back process Contact details available to all safety personnel Spot Trackers used and pre set messages activated Organised search party both on ground and via paraglider Alert to emergency services (LSAR) if the situation is deemed serious or sunset (20:00 NZT) is approaching
Proximity with other aircraft	Mid-air collision leading to crash	 Special airspace arranged with air traffic control Notification to other airspace users in AIP supplement Launch Marshall to suspend launch if congestion occurs

Hang Glider landing in water /trees	DrowningInjury	Task course line to avoid all major areas of water /heavily forested areas
Traffic accident	 Injury ranging from minor to fatal Blockage of access for emergency response 	 Assigned convoy marshal to monitor convoy safety Tactics to reduce upward and downward vehicle traffic at the same time on the mountain roads Ground based safety officer trained in first aid and equipped with first aid kit
Sun burn and sun stroke	BlisteringLack of coordination	 Sun cream available at the take off, provided by the organisation Pilot reminded to bring and use sun cream Limited shade available at take-off, for the launch marshal primarily
Fire	 Forest fire Burn injuries Blockage of access for emergency response 	 Fire extinguishers and shovels, water, and exhaust spark suppressors (for petrol vehicles only) in all vehicles Smoking ban at all competition locations other than the HQ or in enclosed vehicles Electronic cigarettes are not deemed to be a fire hazard

Accidents and Reporting

All incidents and accidents are to be reported. The NZHGPA Operations Manual Section 6.6.13 (available from the NZHGPA website) and that same website's 'Safety' tab has details for filing and reporting accident and incident reports.

The NZHGPA insists on a 'no fault' reporting culture.

For FAI competitions the FAI / CiVL administration also requires an incident /accident report when the results are submitted.

Media

Though Hang Gliding sporting competitions may or may not be advertised to the media, the nature of the sport seems to ensure that the public wants to be notified if there is a significant incident or accident.

In the occurrence of a significant incident or accident, the Competition director and Organisers are the only people authorised to speak with the media in the first instance, and even then, they may defer to the NZHGPA executive for advice.

Fire & Emergency Plans

Fire & Emergency Plans - Refer to separate document (available online on Airtribune)

Conclusion

With all of the above measures in place we can put on a gathering that includes everyone and meets the requirements of the traffic light framework. We recognise it's not ideal, but we ask people to appreciate that either we work with the framework that's in place or we cancel the gathering. Our implementation is not about judging people's personal choices, it's about accepting the right of everyone to make choices for themselves and to try to accommodate them as best we can. Let's get together and fly the skies of Murchison.